

WHAT IS CLAIMED IS:

1. A brake pad for an vehicle, the brake pad comprising:
  - a base member;
  - a pad portion disposed on the base member, the pad portion being constructed from a substantially non-conductive dielectric material; and
  - a first pair of capacitive plates disposed in the pad portion and arranged such that wear of the pad portion changes the capacitance between the first pair of capacitive plates.
2. The brake pad of claim 1, wherein the pad portion is adapted to contact a drum rotor.
3. The brake pad of claim 1, wherein the pad portion is adapted to contact a disc rotor.
4. The brake pad of claim 1, wherein the first pair of capacitance plates are parallel to one another.
5. The brake pad of claim 1, wherein the first pair of capacitance plates are parallel to a direction of wear.
6. The brake pad of claim 5, wherein the first pair of capacitance plates are parallel to one another.

7. The brake pad of claim 1, and further comprising a second pair of capacitance plates disposed within the pad portion and arranged such that capacitance between the second pair does not change with wear of the pad portion.
8. The brake pad of claim 7, wherein wear of the pad portion is a function of the capacitance of the first pair of plates and the capacitance of the second pair of plates.
9. The brake pad of claim 8, wherein the function is related to the quotient of the capacitance of the first pair of plates over the capacitance of the second pair of plates.
10. The brake pad of claim 1, wherein contact between at least one of the plates and a rotor is indicative of brake pad function.
11. A method of determining brake pad thickness in a vehicle, the method comprising:  
measuring a capacitance between a pair of capacitive plates;  
wherein the pair of capacitive plates are disposed in a portion of the brake pad subject to wear, and  
wherein at least one of the pair of capacitive plates becomes smaller as the break pad

wears, and in a manner that changes the capacitance between the pair of plates.

12. The method of claim 11, wherein the method is performed by an electronic control unit of the vehicle.

13. The method of claim 11, wherein the method is performed by a technician.